



**STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY**

*Northwest Regional Office 3190 160th SE Bellevue, Washington 98008-5452 (425) 649-7000*

September 16, 2013

Bob Zeigler, SEPA/NEPA Coordinator  
Washington Department of Fish and Wildlife  
600 Capitol Way N  
Olympia, WA 98501

Dear Mr. Zeigler:

**RE: Ecology SEPA Comments for Invasive Cattail Control Project - Skagit  
Wildlife Area**

Thank you for sending a copy of the determination of nonsignificance (DNS) for the proposed control of invasive cattail at the Skagit Wildlife Area to the Washington State Department of Ecology (Ecology) for our review and comment. As the Ecology Wetland Specialist responsible for Skagit County (County), I wish to have the following comments entered for the record.

The project involves removal of approximately 650 acres of intertidal cattail (*Typha angustifolia* and *T. x glauca*) in and along Skagit Bay at the Washington Department of Fish and Wildlife (WDFW) Skagit Wildlife Area on Fir Island in unincorporated Skagit County, WA. Cattail would be eradicated by cutting, crushing and application of up to 5,000 gallons/year of aquatic herbicide. The project SEPA submittal provided to Ecology included an environmental checklist with a generalized figure showing the proposed cattail control areas.

Ecology is concerned with the scale of the project and that there is insufficient information in the SEPA materials to fully support a determination of nonsignificance. Altering the vegetative structure and water quality of up to 650 acres of intertidal marsh is a significant impact to a critical resource. It is unclear from the information presented in the environmental checklist whether that impact would be beneficial or harmful. We respectfully recommend that WDFW provide more information on the project to reviewing agencies and the public before moving forward with this proposal. Due to the size of the control area and potential impacts to water quality the proposed cattail removal will require an Individual Water Quality Certification (WQC) from Ecology. This project will also need to be reviewed by Ecology and Skagit County for consistency with the County's Shoreline Master Program before a determination can be made on shoreline permitting.

More information needs to be provided on the purpose and need for the project as well as a more detailed analysis of potential environmental impacts. Questions that need to be considered in the project analysis include the following:

- What is the overall project objective and what is the environmental issue the project is hoping to address? While *T. angustifolia* is considered an invasive species, more information needs to be provided on the recent spread of *T. angustifolia* at the project site. Analysis of shoreline aerial photographs back to the 1970s indicate that cattail has been present at the Skagit Wildlife Area for decades and it is unclear how its distribution has changed in recent years.
- What ecological functions (fish and wildlife habitat, nutrient input, water quality, hydrology/hydraulics) are currently impacted either beneficially or adversely, by the presence of *T. angustifolia* and what effect will removal have on those functions? The extensive cattail marshes along the Skagit Bay shoreline are providing some habitat benefit and benefit coastal processes by attenuating wave energy and coastal erosion.
- Has WDFW assessed the potential impacts of cattail removal on water quality and coastal erosion?
- Does the proposed removal include removal of the cattail roots and rhizomes? Mechanical removal of aboveground growth will likely not be effective in eradicating the cattails since they can resprout from rhizomes. Removal of the roots and rhizomes poses a significant risk to water quality and altering the existing bayfront topography. Has WDFW analyzed the potential water quality impacts from mechanical removal? Has the potential impact to nearshore topography (tidal channels, mudflats and vegetated hummocks) been assessed?
- Which control methods will be used and how has WDFW evaluated which methods are appropriate for a given location. Is herbicide application being proposed throughout the 650-acre control area or only at specific locations and if other control methods are not successful? The annual application of up to 5,000 gallons of aquatic herbicide to intertidal habitat seems like a potentially significant impact that may warrant an environmental impact statement.
- If machinery is used to remove the cattails, has the potential impact to other habitat functions been assessed? Have access routes been designated? How much area (square footage) of non-target vegetation will the cattail mowing/crushing impact? Large pieces of downed wood in the estuary provide important microhabitats and raptor perch sites. What impact will machinery moving through the intertidal marsh have on large woody debris (logs and root wads)?
- What will be done with the mown/crushed cattail leaves once they have been cut? Will they be removed for disposal or left in place? If not removed, has WDFW analyzed the potential impact of the plant debris on shoreline functions and processes? The mat of decomposing cattails has the potential to create anoxic conditions in the bay and substrate, potentially impacting aquatic and benthic fauna and ultimately, fish and wildlife.

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- Once the cattails have been removed, will WDFW be replanting the control areas and, if so, with what species? If the control areas are not going to be replanted, how frequently does WDFW contemplate having to repeat the cattail eradication?
- What best management practices (BMPs) will WDFW use to ensure that water quality is protected?

To protect water quality, soil and substrate structure and likelihood of successful re-vegetation, we would recommend that any mechanical equipment used needs to have a low ground pressure of < 2lbs/square inch. This is based on field experience in Massachusetts salt marshes. Higher pressures will damage the soil and reduce the re-vegetation. We would also recommend that once WDFW has more fully assessed the potential project environmental impacts that a pilot project be designed to evaluate the best approach to controlling the cattails and ensuring the outcomes that WDFW is hoping to achieve. Before beginning the cattail control, we would also recommend a pre-application meeting with regulatory agencies and interested stakeholders to review the required permitting for the project. Once the agencies have reviewed the revised proposal we will be better able to advise WDFW on the required permitting.

While this project has the potential to provide an environmental benefit, we believe more analysis is needed on potential impacts and project implementation. If you have any questions or would like to discuss my comments, please give me a call at (425) 649-7148 or send an email to [paan461@ecy.wa.gov](mailto:paan461@ecy.wa.gov).

Sincerely,



Paul S. Anderson, PWS  
Wetland Specialist  
Shorelands and Environmental Assistance Program

PSA: ca

E-cc: Erik Stockdale and Bob Fritzen, Ecology  
Matthew Bennett, U.S. Army Corps of Engineers Seattle District Office  
John Cooper, Skagit County